

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 77-107

NPDES NO. CA0037842

WASTE DISCHARGE REQUIREMENTS FOR:

CITIES OF SAN JOSE AND SANTA CLARA
SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board), finds that:

1. Cities of San Jose and Santa Clara (hereinafter discharger), by application dated January 31, 1977, has applied for waste discharge requirements and a permit to discharge wastes under the National Pollutant Discharge Elimination System.
2. The discharger presently discharges domestic and industrial wastes from its treatment plant into Artesian Slough tributary to San Francisco Bay, a water of the United States, at 37° 26', 06" Latitude and 121° 57', 08" Longitude.
3. The report of waste discharge describes the existing discharge as follows:

Average Flow: 88.8 million gallons per day (mgd)
Design Flow: 160.0 million gallons per day (mgd)
4. The State Water Resources Control Board, on May 16, 1974, adopted a Water Quality Control Policy for the Enclosed Bays and Estuaries of California. The policy includes the following:

"The State Board and the San Francisco Regional Board shall take such action as is necessary to assure the elimination of wastewater discharges to waters of the San Francisco Bay south of the Dumbarton Bridge at the earliest practicable date."
5. A Water Quality Control Plan for the San Francisco Bay Basin was adopted by the Board in April 1975. The Basin Plan contains water quality objectives for Artesian Slough and San Francisco Bay.
6. The Beneficial uses of Artesian Slough and San Francisco Bay are:
 - a. Recreation
 - b. Fish migration and habitat
 - c. Habitat and resting for waterfowl and migratory birds
 - d. Industrial water supply
 - e. Esthetic enjoyment
 - f. Navigation

7. The discharge is presently governed by Waste Discharge Requirements Order No. 74-168 which allows discharge to Artesian Slough.
8. The Board on November 23, 1971, adopted Order No. 71-78 requiring the discharger to cease and desist from discharging wastes contrary to effluent toxicity requirements of Resolution No. 70-91. The discharger has an industrial waste program to regulate industrial sources of toxicity. The NPDES permit contains an interim toxicity limitation and a time schedule for full compliance with effluent toxicity. Order Nos. 70-91 and 71-78 are no longer applicable.
9. Section 301(b) of the Federal Water Pollution Control Act Amendments of 1972 requires all publicly-owned treatment plants to achieve effluent limitations based upon secondary treatment no later than July 1, 1977. Secondary treatment has been defined by the EPA Administrator in 40 CFR 133, dated July 26, 1976.
10. The Board intends to consider adoption of an Enforcement Order for Issuance of a Time Schedule for the discharger to insure timely compliance with secondary treatment requirements. The discharger will not meet the secondary treatment standards prescribed by the Federal Act prior to the July 1, 1977, deadline.
11. The discharger and interested agencies and persons have been notified of the Board's intent to revise requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
13. This project involves the continued operation of a publicly-owned facility to provide sewerage service with negligible or no expansion of use beyond that previously existing. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15101, Title 14, California Administrative Code.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions:

1. Discharge of waste to waters of San Francisco Bay south of Dumbarton Bridge or tributaries thereto is prohibited.
2. There shall be no bypass or overflow of untreated wastewater to waters of the State at the treatment plant or from the collection system under the control of the City of San Jose.
3. The average dry weather flow shall not exceed 160.0 mgd. Average shall be determined over three consecutive months each year.

B. Effluent Limitations:

1. Prior to achieving compliance with limitations specified in B.3, B.5, B.7, and B.8 below the following interim limitations shall apply:

<u>Constituents</u>	<u>30-day Average</u>			<u>Daily Maximum</u>
	<u>mg/l</u>	<u>lbs/day</u>	<u>kg/day</u>	<u>lbs/day</u>
a. BOD	60	80,100	36,300	160,000
Suspended Solids	120	160,100	72,600	320,000
Oil and Grease	15	20,016	9,080	40,000
b. Total Coliform	bacteria for a median of 5 consecutive samples shall not exceed 240 MPN/100 ml. Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria per 100 ml when verified by a repeat sample taken within 48 hours.			
c. Settleable matter	0.1 ml/l-hr (30 day Average); 0.5 ml/l-hr (maximum)			
d. Toxicity	Survival of test organisms acceptable to the Regional Board in 96 hour bioassays of the effluent shall achieve a median of 70% survival for five consecutive samples.			

2. Chlorine residual shall not exceed an instantaneous maximum of 0.0 mg/l.
3. The discharge of an effluent containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>7-Day Average</u>	<u>Maximum Daily</u>	<u>Instantaneous Maximum</u>
a. BOD	mg/l	10	-	20	-
	lbs/day	17,140	-	34,250	-
	kg/day	7,780	-	15,560	-
b. Suspended Solids	mg/l	10	-	20	-
	lbs/day	17,140	-	34,300	-
	kg/day	7,780	-	15,550	-
c. Oil & Grease	mg/l	5	-	10	-
	lbs/day	8,570	-	17,140	-
	kg/day	3,890	-	7,780	-
d. Settleable Matter	ml/l-hr	0.1	-	-	0.2
e. Turbidity	JTU	-	-	-	10.0

4. The discharge shall not have pH of less than 6.5 nor greater than 8.5.
5. In any representative set of samples, the waste as discharged shall meet the following limit of quality:

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The survival of test organisms acceptable to the Regional Board in 96-hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

6. Representative samples of the effluent shall not exceed the following limits more than the percentage of time indicated.^{a/}

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
Arsenic	mg/l (kg/day)	0.01(6.1)	0.02(12.1)
Cadmium	mg/l (kg/day)	0.02(12.1)	0.03(18.2)
Total Chromium	mg/l (kg/day)	0.005(3.0)	0.01(6.1)
Copper	mg/l (kg/day)	0.2(121)	0.3(181)
Lead	mg/l (kg/day)	0.1(60.1)	0.2(121)
Mercury	mg/l (kg/day)	0.001(0.61)	0.002(1.21)
Nickel	mg/l (kg/day)	0.1(60.1)	0.2(121)
Silver	mg/l (kg/day)	0.02(12.1)	0.04(24.2)
Zinc	mg/l (kg/day)	0.3(181.6)	0.5(303)
Cyanide	mg/l (kg/day)	0.1(60.6)	0.2(121)
Phenolic Compounds	mg/l (kg/day)	0.5(303)	1.0(605)
Total Identifiable Chlorinated Hydrocarbons	mg/l (kg/day) ^{b/}	0.002(1.21)	0.004(2.4)

^{a/}These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

^{b/}Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

7. The arithmetic mean of values for BOD and Suspended Solids in effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of respective values for influent samples collected at approximately the same times during the same period (i.e., 85 percent removal).
8. At some point in the treatment process, the waste shall not exceed a median MPN of Coliform Organisms of 2.2/100 ml as determined from the results of the previous consecutive seven (7) days for which analysis have been completed.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place.
 - a. Floating, suspended, or deposited macroscopic particulate matter, or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved oxygen 5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. Dissolved sulfide 0.1 mg/l maximum.
 - c. pH Variation from natural ambient pH by more 0.2 pH units.
 - d. Un-ionized Ammonia 0.025 mg/l annual median
as N 0.4 mg/l maximum

D. Land Disposal Requirements

1. The discharge of sewage sludge shall not cause waste material to be in any position where it is, or can be, carried from the Land Disposal Site and deposited in waters of the State.
2. The Land Disposal Site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site. Adequate protection is defined as protection from at least a 100-year storm and from the highest tidal stage that may occur.
3. The disposal of Group 1 material, as defined in the California Administrative Code, Article 3, Section 2520, in the Land Disposal Site is prohibited.

E. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 74-168, adopted by the Board on December 6, 1974. Order No. 74-168 is hereby rescinded. In addition Order No. 70-91 and Cease and Desist Order No. 71-78 are hereby rescinded.

2. The discharger shall comply with the following time schedule to assure compliance with specifications of this Order.

- a. Compliance with effluent limitations B.3., B.5., B.7., and B.8; Receiving Water Limitations C.1.a.c, C.2.a, and C.2.d:

<u>Task</u>	<u>Completion Date</u>
Full Compliance	July 1, 1977

- b. Compliance with Prohibition A.1:

<u>Task</u>	<u>Completion Date</u>	<u>Report of Compliance Due</u>
Status Report	-	August 2, 1977
Submit Draft EIS	February 1, 1978	February 15, 1978
Submit Project Report & Final EIS	June 15, 1978	June 30, 1978
Submit a time schedule to comply with Prohibition A.1	August 1, 1978	August 15, 1978

- c. Compliance with effluent limitation B.6

<u>Task</u>	<u>Completion Date</u>	<u>Report of Compliance Due</u>
Status Report	-	December 15, 1977
Status Report	-	June 15, 1978
Documentation of compliance with effluent limitations	December 1, 1978	December 15, 1978

This Regional Board will consider amendment of the effluent limitation B.6 if the discharger demonstrates that compliance cannot be achieved through a program acceptable to the Board for source control and pretreatment standards.

- d. The discharger shall comply with all other effluent and receiving water limitations, prohibitions and provisions of this Order immediately upon adoption.

3. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
4. The discharger shall comply with the self-monitoring program as ordered by the Executive Officer.
5. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977 except B.3.
6. This Order expires on July 1, 1982, and the discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 19, 1977.

FRED H. DIERKER
Executive Officer

Attachments:

Standard Provisions, Reporting
Requirements & Definitions
Self-Monitoring Program Part A & B